

A vector of Aspergillus  
transformation conferring  
phleomycin resistance.

expressed A. nidulans gpd gene, and the

Recently, transformation of Aspergillus  
species with vector pAN7-1, conferring resis-  
tance to hygromycin B was reported (Punt et al.  
1987 Gene 56:117-124). Here we describe a trans-  
formation vector (pAN8-1, Fig. 1) containing the  
Streptococcus hindustanus phleomycin resistance  
gene (obtained from G. Tiraby, Toulouse, France)  
flanked by the promoter region of the highly  
terminator region of the A. nidulans trpC gene.

Transformation of A. nidulans and A. niger was achieved with this vector at  
frequencies of 1 to 20 transformants per ug pAN8-1 DNA. These frequencies are similar to  
those found for transformation with pAN7-1. Transformants could be selected at low  
concentrations of phleomycin (5-10 ug/ml for A. niger, 10-20 ug/ml for A. nidulans).

A. oryzae, which cannot be transformed with pAN7-1 because of its innate insensiti-  
vity to hygromycin B, is inhibited in its growth at 50-100 ug/ml phleomycin. Phleomycin  
resistant transformants were obtained by cotransformation of an A. oryzae pyrG mutant  
with pAB4-1 (containing the A. niger pyrG gene) and pAN8-1 (Mattern et al. 1987, MGG  
210:460-461). Experiments are in progress to achieve direct selection of phleomycin  
resistant transformants of A. oryzae.

Figure 1. Vector pAN8.1. A 0.4 kb NcoI-StuI  
fragment from pUT701 (G. Tiraby, unpublished)  
containing the coding region of the S.  
hindustanus phleomycin resistance gene was  
ligated into pAN52-3, which was cut with HindIII,  
treated with T4 polymerase and subsequently cut  
with NcoI. Vector pAN52-3 is a derivative of  
pAN52-1 (Punt et al. 1987 Gene 56:117-124) in  
which the unique BamHI site was converted into a  
HindIII site by site directed mutagenesis.

